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EXAMINER

BARBER, THERESE

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/064,201

Applicant(s)

PI ET AL.

Examiner

Therese Barber

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-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-12 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because the abstract is a single sentence. According, to MPEP § 608.01(b), the abstract should be in narrative form and generally limited to a single paragraph within the range of 50 to 250 words. The abstract should not exceed 25 lines of text. Abstracts exceeding 25 lines of text should be checked to see that it does not exceed 250 words in length since the space provided for the abstract on the computer tape by the printer is limited. If the abstract cannot be placed on the computer tape because of its excessive length, the application will be returned to the examiner for preparation of a shorter abstract. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should sufficiently describe the disclosure to assist readers in deciding whether there is a need for consulting the full patent text for details.

Appropriate correction is required.

### ***Claim Objections***

2. Claims 1-12 are objected to because of the following informalities:

Regarding claims 1-12, the term "device" is vague. In the specification, the applicants utilize the phrase "fiber tap monitor" to describe the instant invention.

Regarding claims 1 and 7, line 1, the phrase "direct light" should be replaced with the phrase "to direct the confined light" to be consistent with the description of the light in line 5 of both claims.

Regarding claim 3, the limitation of “wherein said fiber has a portion in said groove that includes said surface” is unclear. One could interpret that only the portion of the optical fiber with the removed fiber cladding is located within the groove of the substrate. However, from the drawings (fig. 2E), it appears that the additional portions of the optical fiber are localized within the groove.

Regarding claim 4 and claim 10, the limitations of the claim language are unclear. One could interpret from the limitations of the claimed language that the applicants are maintaining that the instant invention is comprised of an optical waveguide having a region of evanescent coupling, wherein a detector is coupled to the region of evanescent coupling. However, from the drawings, it appears that an optical fiber is secured with the confines of a planar optical waveguide.

Regarding claim 7, line 6 and line 10, the phrase “said surface” should be replaced with the phrase “said side surface” to clarify that the applicants are referring to the side surface of the optical waveguide conduit.

Regarding claim 8, line 2 and claim 9, line 3, the phrase “said surface” should be replaced with the phrase “said side surface” to clarify that the applicants are referring to the side surface of the optical waveguide conduit.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Bridges et al. (USPN 4,453,802).

5. Regarding claims 1, 2, 4, Bridges discloses an optical waveguide/detector combination comprised of an optical waveguide conduit that is operable to confine light and direct the confined light along an optical axis (col. 3, line to col. 4, line 16; figs. 1a and 2); a surface formed on a side of the optical waveguide conduit and position in a region where an evanescent field of the confined light exists (col. 4, lines 17-26 and lines 42-57); an optical detector coupled to the surface to receive and detect the power of the evanescent field (col. 3, lines 3-6 and col. 4, lines 10-16); wherein the optical waveguide conduit is a planar waveguide formed on a substrate (col. 3, line 65 to col. 4, line 11); wherein the optical waveguide conduit is a fiber (col. 4, lines 27-29); wherein the surface is formed by removing a portion of the fiber cladding (col. 4, lines 27-31 and lines 53-57).

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Deimel et al. (GB 2220083A).

7. Regarding claims 1 and 4, Deimel discloses an optical waveguide/detector combination comprised of an optical waveguide conduit that is operable to confine light and direct the confined light along an optical axis (col. 3, lines 9-10; col. 4, lines 16-25; fig. 2); a surface formed on a side of the optical waveguide conduit and position in a region where an evanescent field of the confined light exists (col. 3, lines 9-10; col. 4, lines 16-25; fig. 2); an optical detector

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coupled to the surface to receive and detect the power of the evanescent field (col. 3, line 24 to col. 4, line 15; abstract); wherein the optical waveguide conduit is a planar formed on a substrate (col. 3, lines 24-27).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bridges as applied to claims 1 and 2, respectively, and further in view of Bennion et al. (USPN 4,795,226).

Regarding claim 3, Bridges fails to specifically disclose that the fiber has a portion in the groove that includes the side surface.

Bridges discloses all of the limitations for claims 1 and 2 as stated above. In addition, from Fig. 1a, it appears that core (24'') is located within a groove (24') and that the core section is comprised of a material such as thallium bromoiodide fiber (col. 4, line 26-29).

Bennion discloses an optical device that is comprised of a portion of an optical fiber is accommodated with a curved slot or groove formed in a support block structure (col. 3, lines 34-42). In addition, Bennion discloses that a portion of the optical fiber can be polished or pared away to a specific depth (col. 3, lines 53-61) for qualitative and/or quantitative reflection of light traveling along the optical fiber (col. 1, lines 6-9 and lines ).

It would have been obvious to one having ordinary skill in the art at the time the invention was made the optical waveguide/detector combination with the core section of Bridges could be modified to include an optical fiber having a polished surface as disclosed by Bennion. Accordingly, the resultant structure will have a polished surface.

***Allowable Subject Matter***

10. Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including overcoming all of the claims objections and all of the limitations of the base claim and any intervening claims.

Regarding claims 5 and 6, the claims would be allowable if rewritten because the prior art fails to an optical fiber tap monitor that utilizes the side-surface optical fiber to monitor the evanescent light having the overlay layer and the variable optical attenuator, as set forth in the claimed combination.

11. Claims 7-12 are allowed if rewritten to overcome the claim objections.

Regarding claims 7-12, the claims are allowed because the prior art fails to an optical fiber tap monitor that utilizes the side-surface optical fiber to monitor the evanescent light having the overlay layer and the variable optical attenuator, as set forth in the claimed combination.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Therese Barber whose telephone number is (703) 306-0205. The examiner can normally be reached on Monday to Friday from 8:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4857 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

tb *AB*  
May 29, 2003

*Robert H. Kim*  
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